Geometry 9.6 Assignment: Solving Right Triangles (pp 567-569)

1. What is your name?

$\measuredangle A$ is an acute angle. Use a calculator to approximate the measure of $m\measuredangle A$. Round your answer to 4 to the nearest degree.

2. cos A = 0.87

3. sin A = 0.42

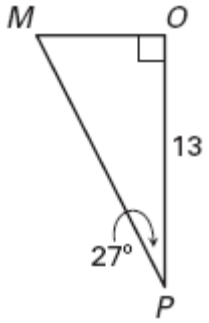
4. sin A = 0.06

5. tan A = 0.84

Solve the right triangle. Round side lengths to the nearest tenth & angle measures to the nearest degree.

6.

7.



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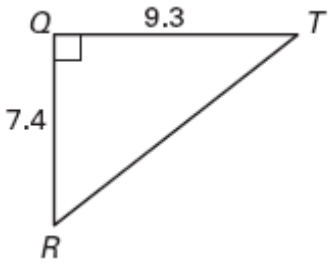
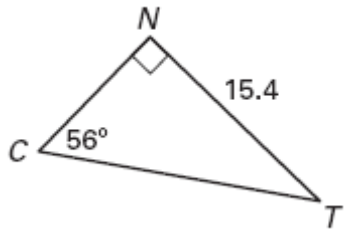
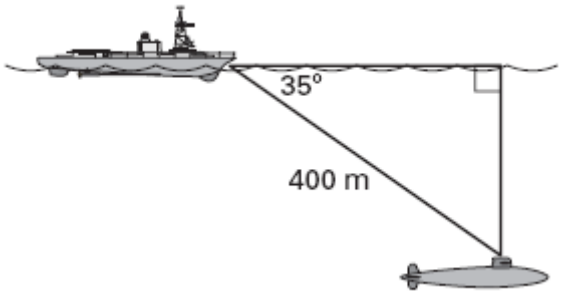
8.



9.



10. A sonar operator on a ship detects a submarine at a distance of 400 meters and an angle of depression of 35°. How deep is the submarine?



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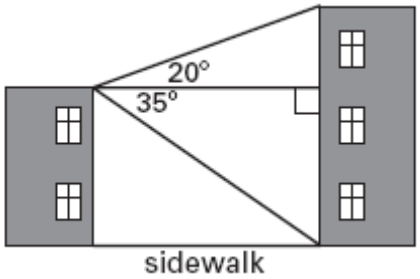
11. Two buildings are 60 feet apart across a street. A person on top of the shorter building finds the angle of elevation of the roof of the taller building to be $20°$ and the angle of depression of its base to be $35°$. How tall is the taller building to the nearest foot?

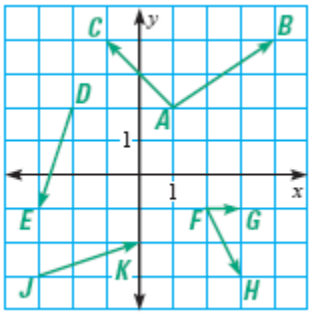


Review.

Write the component form of the vector. *(Chapter 7 Section 7)*

12. $\overrightarrow{FH}$

13. $\overrightarrow{AC}$



14. $\overrightarrow{FG}$

15. $\overrightarrow{JK}$

Solve the proportion. *(Chapter 8 Section 1)*

16. $\frac{7}{16} = \frac{49}{y}$

17. $\frac{m}{2} = \frac{7}{1}$

18. $\frac{3}{10} = \frac{g}{42}$

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19. $\frac{8}{t} = \frac{4}{11}$

Decide whether the numbers can represent the side lengths of a triangle. If they can, classify the triangle as *right*, *acute*, or *obtuse*. *(Chapter 9 Section 3)*

20. 60, 228, 220

21. 113, 15, 112

22. 8.5, 7.7, 3.6

23. 15, 75, 59